

DIRECT TESTIMONY OF
STEPHEN M. CUNNINGHAM

ON BEHALF OF
SOUTH CAROLINA ELECTRIC & GAS COMPANY
DOCKET NO. 2004-002-E

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Stephen M. Cunningham. My business address is 111 Research Drive,
Columbia, SC, 29203.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by South Carolina Electric and Gas Company (SCE&G) and manage the
development of new generation projects.

**Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND BUSINESS
EXPERIENCE.**

A. I received a Bachelor of Science degree in Electrical Engineering from Clemson University
in 1972. I began my career with Duke Power Company that same year, performing design work
on coal and nuclear generating plants. In 1974, I was employed by SCE&G to work on the
design, construction and operation of the V. C. Summer Nuclear Station. During my fifteen-year
affiliation with the nuclear project, I performed various engineering functions from design to
management. In 1989, I transferred to the fossil and hydro generation group, where I managed
the design engineering organization. From 1992 through 1996, I was Plant Manager at

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1 SCE&G's Wateree Station. In 1996, I moved to the Power Block Services group where I
2 currently manage and coordinate the development of new generation projects.

3 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

4 **A.** The purpose of my testimony is to describe the arrangements we have made for providing
5 fuel to operate SCE&G's Jasper County Generation Project. Previously, in Docket No. 2001-
6 420-E, the siting proceeding for the Jasper Project, Neville Lorick, President of SCE&G, and I
7 described generally what was contemplated for fuel procurement at that time. Our final
8 decisions are consistent with that initial planning.

9 **Q. PLEASE DESCRIBE THE JASPER COUNTY GENERATION PROJECT AND ITS**
10 **FUEL REQUIREMENTS.**

11 **A.** The Jasper project is a combined cycle plant composed of three combustion turbine-
12 generators, three heat recovery steam generators and one steam turbine-generator. The
13 combustion turbines are equipped with inlet chilling to maximize the output of the plant during
14 hot weather. The plant generates approximately 775 megawatts during the winter and 750
15 megawatts during the summer. The plant has the capability to generate additional "peaking"
16 output of about 120 megawatts using supplementary firing. This is accomplished by burning
17 additional fuel in the steam generators producing more steam and more output from the steam
18 turbine-generator. The peak output from the plant is approximately 900 megawatts during the
19 winter and 875 megawatts during the summer.
20 Natural gas is the primary fuel for the combustion turbines with No. 2 fuel oil available as a
21 back-up. The supplementary firing burners can only burn natural gas. Operating the combustion
22 turbines at full output for 24 hours requires approximately 130,000 dekatherms of natural gas.
23 Operating the supplementary firing burners at full output adds about 1200 dekatherms per hour

1 or about 29,000 dekatherms for 24 hours of operation. Operating the combustion turbines at full
2 output with the back-up fuel consumes approximately 40,000 gallons of No. 2 fuel oil per hour.
3 The primary reason for the back-up fuel capability is to assure the plant can operate to meet peak
4 electrical demands in the event gas service is curtailed or interrupted. But having the option to
5 operate with an alternate fuel also enables us to use a combination of firm and interruptible gas
6 transportation as well as take advantage of market opportunities when gas is in high demand and
7 fuel oil prices are low relative to natural gas. However, the environmental air permit issued by
8 DHEC limits the amount of fuel oil that can be burned by the facility on a daily and yearly basis
9 effectively preventing the plant from operating exclusively on fuel oil.

10 **Q. PLEASE DESCRIBE YOUR FUEL PROCUREMENT REQUIREMENTS AND**
11 **YOUR PLAN FOR MEETING THEM.**

12 A. To meet its natural gas requirements, SCE&G will shortly finalize an agreement with
13 SCANA Energy Marketing, Inc. (SEMI), a copy of which is hereby provided under seal in this
14 docket as Exhibit No. ____ (SMC-1). The reason the agreement will be provided under seal is
15 that its contents are of a very sensitive, commercially competitive nature for SCE&G, SEMI, and
16 upstream providers and, therefore, are considered proprietary. It is recognized, however, that the
17 Commission must have the document available for review in order to determine the
18 reasonableness and prudence of the contractual arrangement, and, thus, it is provided under seal
19 for your review. In the open record, I can tell you that the agreement provides for up to 120,000
20 dekatherms/day of firm supply. The balance of our requirements will be purchased on an
21 interruptible basis. SEMI has contracted with SCG Pipeline, Inc., a recently formed interstate
22 pipeline and SCANA subsidiary, to transport gas to the generation project from the Southern
23 Natural Gas pipeline (SONAT) and from the Elba Liquefied Natural Gas (LNG) facility located

1 near Savannah, Georgia. SEMI has also entered into contracts with upstream providers for the
2 supply and transportation of natural gas with delivery to the SGC pipeline. Exhibit No. ____
3 (SMC-2) is a diagram showing the location of the Jasper project and the arrangement of these
4 pipelines. Using these diverse sources of supply and transportation, SEMI has been able to
5 structure an arrangement that will provide SCE&G with gas supply and transportation at
6 competitive rates and terms. Also, by receiving gas from two points of origin, we will
7 substantially reduced the implications of service interruptions. We believe, and represent to the
8 Commission, that the contractual arrangement with SEMI provides a very reliable and flexible
9 supply of gas with pricing that is competitive with alternatives in the area. We, therefore,
10 respectfully request that the Commission find this contractual arrangement to be prudent.

11 **Q. WILL YOU ALSO COMMENT ON SCE&G's ALTERNATIVE FUEL?**

12 A. Yes. SCE&G will fire the units utilizing distillate (No.2) fuel oil when the natural gas supply
13 is limited or not available, or it is economically advantageous to do so. This fuel is delivered to
14 the Jasper Project from local terminals in truck tankers and stored in storage tanks that can hold
15 3.6 million gallons. This fuel is purchased in competitive solicitations from local suppliers
16 similar to oil purchased for other SCE&G generating facilities. The prudence of our fuel oil
17 purchases, of course, will be addressed annually by the Commission in fuel proceedings such as
18 this one.

19 **Q. DOES THIS COMPLETE YOUR TESTIMONY?**

20 A. Yes.

GAS SUPPLY AND TRANSPORTATION AGREEMENT

between

SOUTH CAROLINA ELECTRIC & GAS COMPANY, as Buyer

and

SCANA ENERGY MARKETING, INC., as Seller

(Submitted under Seal)

